



# Anion Gap

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# Anion Gap

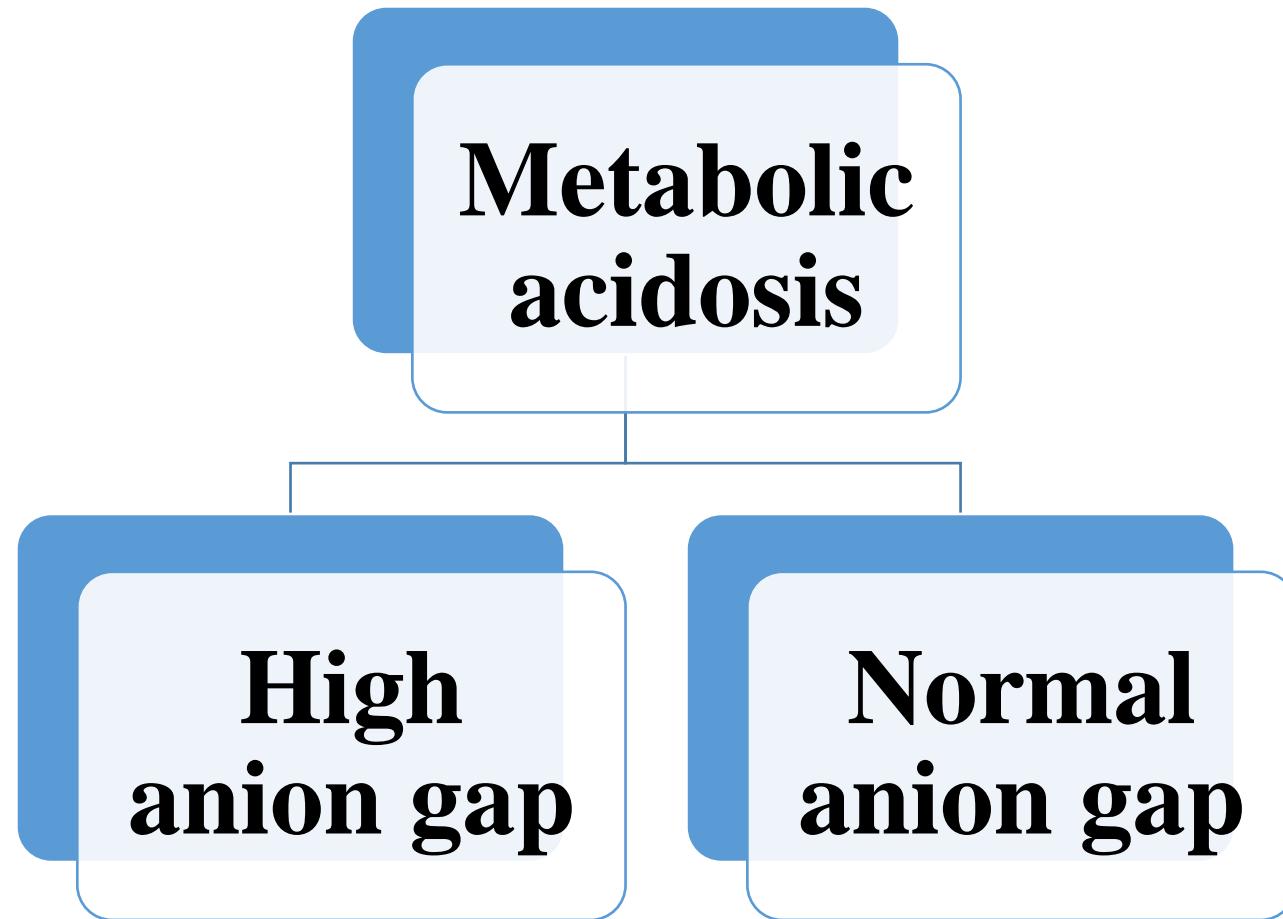
The anion gap (AG) is a rough estimate of the relative abundance of unmeasured anions due to accumulation of non-volatile acid

# How to calculate?

- Anion gap is estimated easily from calculation of electrolyte routinely measured

$$AG = Na^+ - Cl^- - HCO_3^-$$

# Classification of metabolic acidosis



## High anion gap

- Lactic acidosis
- Diabetic ketoacidosis
- Uremic acidosis
- Methanol poisoning
- Ethylene glycol poisoning
- Salicylate poisoning

## Normal anion gap

- Diarrhea
- Renal tubular acidosis
- Early renal failure
- Chronic use of acetazolamide

## Anion Gap

- Glycols
- Oxaproline
- L-Lactate
- D-Lactate
- Methanol (Alcohols)
- Aspirin
- Renal Failure
- Ketones

## Osmolar Gap

- Sugars
- Lipids
- Alcohols/Acetone
- Proteins

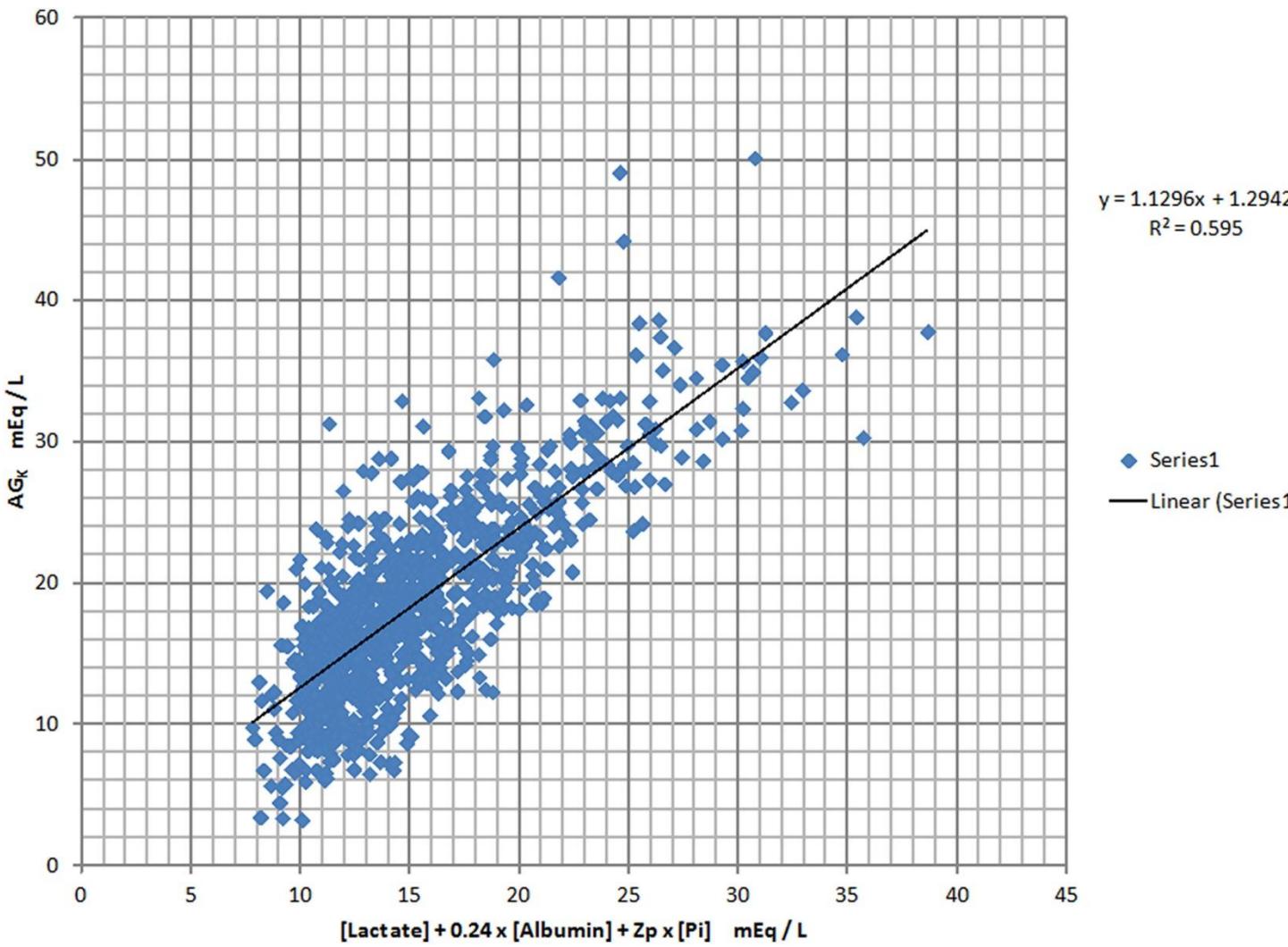
Glycols  
Alcohols  
Acetone

# Factors influencing

Concentration of albumin

Inorganic phosphate

Potassium

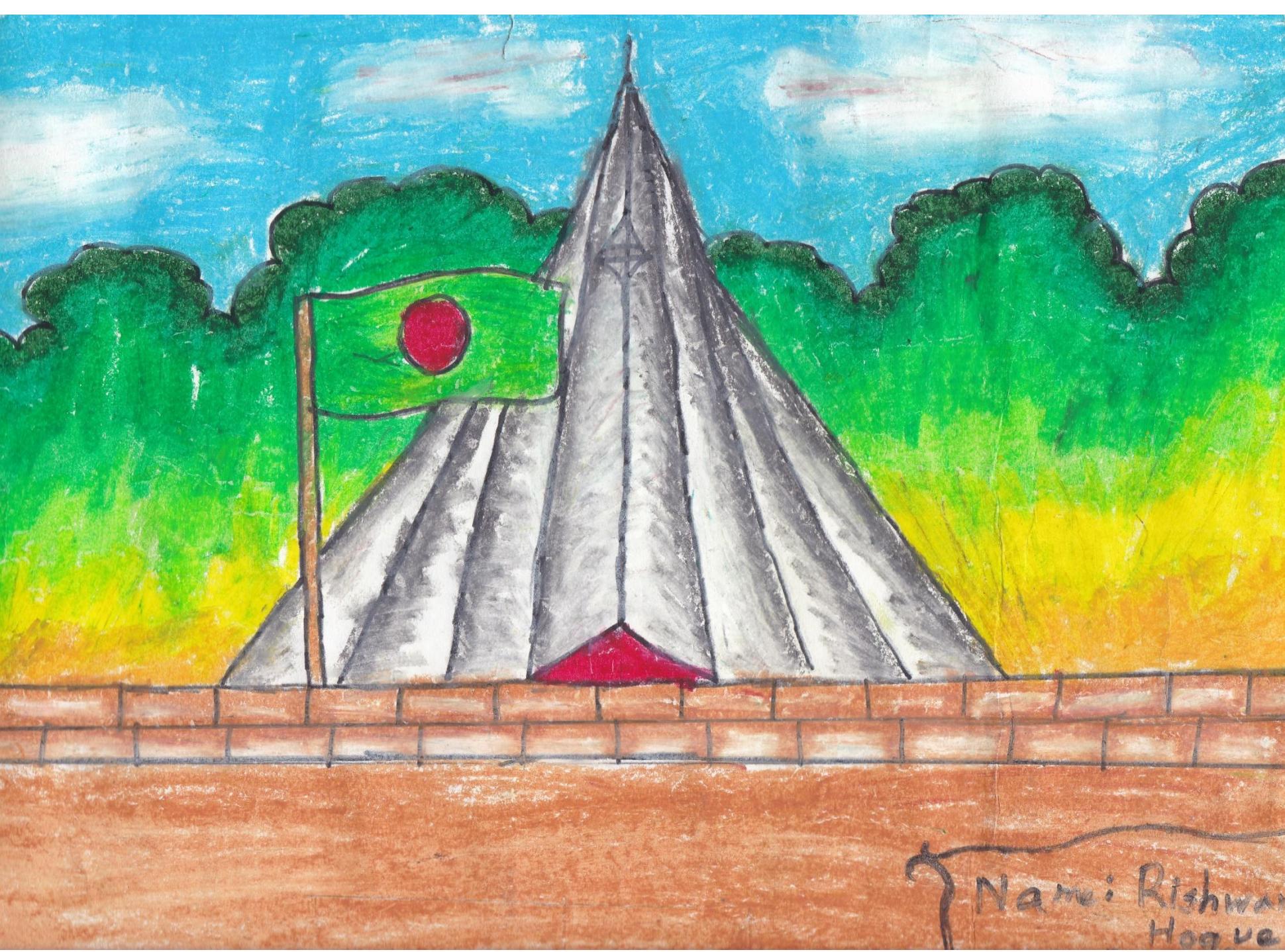


$$AG_c = AG + 2.5 \times (45 - [\text{Albumin in gm/dl}])$$



**Underlying mechanism & etiology of metabolic acidosis**

**Prognosis**



Thank  
You  
All

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